



Product Summary

With the 4030-10G, service providers can deliver new levels of service to their customers:

- **Security:** Hardware-based Advanced DNS Protection guards against DDoS and other stealth attacks.
- **Latency:** DNS latency under five microseconds enables rapid Internet response for advanced gaming, social media, and content-sharing applications.
- **Carrier scale:** Purpose-built carrier-grade appliance scales up to five million DNS queries per second; an Infoblox Grid™ configuration of 4030-10Gs can scale into billions of queries per second.
- **Management:** Centralized management for multiple appliances via the Infoblox Grid™ delivers 1-touch automated upgrades.
- **Protection:** This device provides seamless automated disaster recovery for business continuity.

Secure DNS for Service Providers

With the rise of social media and the mobile web, already-burdened DNS infrastructures are experiencing unprecedented rises in traffic. Along with these trends, security attacks are growing in sophistication and in pure volume. Global hackers are compromising DNS to steal credentials from end users, and are assembling botnets—literally thousands of personal computers acting as one—to launch distributed-denial-of-service (DDoS) attacks as well as stealth attacks that can bring down the DNS infrastructure. While attacks on DNS are on the increase, it is also critical that DNS performance is maintained, ensuring a first-class customer experience by minimizing DNS latency and ensuring that the DNS infrastructure is simple but highly scalable to meet carriers' needs and is cost-effective to manage.

A New Solution for These New Problems

The Infoblox 4030-10G DNS Caching appliance was built as a direct response to customer demand. The 4030-10G provides DNS caching at unprecedented volumes up to five million DNS queries per second, to ensure that the integrity of the DNS system is protected. Now, with Infoblox Advanced DNS Protection, the Infoblox 4030-10G delivers added protection against DDoS and stealth attacks while helping operators maintain the operational efficiencies and carrier-level scaling that enable global business continuity for customers.

Low-latency DNS

As broadband traffic levels increase—largely driven by growth in tablet and smartphone use—it becomes increasingly critical to maintain a high level of customer satisfaction with fast application response times. In order to meet these expectations, service providers (SPs) need a new approach for handling the type of traffic responsible for the growth, namely, mobile web and social media. Instead of relying on centralized caching servers, SPs need to place server capacity close to customers in a distributed rather than centralized manner.

By combining advanced hardware computing platforms with highly optimized DNS caching software, Infoblox enables SPs to build highly scalable DNS caching solutions that meet the rapidly growing demands from their customers. Each Infoblox 4030-10G (controlled by licensing) can support DNS query rates up to five million queries per second as a standalone appliance. By leveraging multiple 4030-10Gs in a distributed Infoblox Grid™ configuration, billions of queries per second can be processed.

In addition to raw DNS transaction capability, the Infoblox 4030-10G appliance delivers unprecedented low levels of DNS query latency. This enables traffic from the latest applications such as Internet gaming, high-frequency trading, content sharing, and social media to be handled, giving customers a rapid Internet response time that ultimately ensures a high level of user satisfaction.

In addition to physical device scalability, Infoblox provides labor scalability, enabling ISPs to grow their infrastructures without adding operations support staff. The Infoblox Grid™ architecture enables distributed appliances to be effectively managed from a central location or several regional locations, thereby ensuring that configurations can scale without operational limits.



Infoblox 4030-10G DNS Caching Appliance



Key Benefits for Service Providers

- **Handles the “perfect storm” of social media and mobile:** Provides the edge-based scalability needed to prevent signal-storm outages, resist denial-of-service attacks, and repel hacker threats.
- **Fits into service provider environments:** The 4030-10G was designed for service provider environments with features such as carrier-grade hardware, edge deployment, and centralized management.
- **Strengthens service provider economics:** Protects the top line by minimizing user churn and the bottom line by minimizing both capital equipment and operational expenses, such as replacing 25 legacy DNS servers per appliance.

Advanced DNS Protection

Attacks are growing in sophistication and in sheer volume, and DNS servers are now viewed as the number-one exposure by mobile service providers. While high-volume DDoS attacks attempt to make the network fail, other more stealthy attacks seek to compromise the quality of the DNS data to redirect traffic to a fake site, to steal user credentials, or to infect computers with malware. Infoblox addresses these threats with an all-new advanced solution.

Infoblox Advanced DNS Protection is the industry’s most comprehensive and integrated protection solution for service provider DNS infrastructure. It includes:

- Advanced, automated detection and mitigation capability for DNS-based DDoS attacks such as floods, amplification, and reflection attacks, as well as stealth attacks such as protocol anomalies, cache poisoning, and DNS tunneling, all integrated with the DNS server
- Dedicated, hardware-based filtering that drops malicious traffic and allows valid DNS queries to reach the server, as well as ongoing threat protection with a daily feed service that updates the onboard threat rules—without requiring server reboots or disruptive maintenance windows
- A purpose-built, carrier-grade appliance family that includes the world’s fastest Secure DNS caching server and support for DNS caching and authoritative DNS deployments
- Threat intelligence and mitigation rules with automatic updates from Infoblox
- Patented Infoblox Grid™ technology that provides extensive control, automation, and distribution of updates, reducing operational support costs and eliminating the risk of outages caused by manual configuration errors

Centralized Management Visibility

Management challenges typically revolve around ensuring that service-level agreements (SLAs) are met, capital costs are minimized, and operational costs are ideally kept flat even when the network is expanded.

The 4030-10G provides significant savings in power and rack space, yielding a reduction in server-based operational costs. On the basis of units needed to attain one million QPS, the 4030-10G replaces approximately 25 legacy DNS servers. In terms of rack space, at a modest 2 U’s, the 4030-10G takes up about the same space as a single server.

By managing all servers from a central location or a few regional locations, SPs gain visibility into performance issues while centralizing administration of all servers and concentrating support staff and expertise where needed. By implementing the 4030-10G in an Infoblox Grid™ architecture, SPs can flatten operational support costs through automation of routine maintenance tasks such as patches and upgrades, and monitoring even a worldwide distributed system via a single pane of glass.

About Infoblox

Infoblox delivers Actionable Network Intelligence to enterprises, government agencies, and service providers around the world. As the industry leader in DNS, DHCP, and IP address management (DDI), Infoblox provides control and security from the core—empowering thousands of organizations to increase efficiency and visibility, reduce risk, and improve customer experience.